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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/757,696	01/11/2001	Erland Leide	LEIDE=1	8008

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EXAMINER

AZARIAN, SEYED H

ART UNIT PAPER NUMBER

2625

DATE MAILED: 02/25/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

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**Office Action Summary**

Application No.

09/757,696

Applicant(s)

ERLAND LEIDE

Examiner

Seyed Azarian

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 January 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4,6-8,12,14-22 and 26 is/are rejected.
- 7) ☐ Claim(s) 5,9,10,11,13,23-25 and 27 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 January 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4,5,6.                      6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

**Claim Rejections - 35 USC § 103**

1. Following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4, 6-8, 12, 14-22 and 26, are rejected under 35 U.S.C. 103(a) as being unpatentable over Satake et al (U.S. patent 5,245,188) in view of Gray et al (U.S. patent 5,641,596).

Regarding claim 1, Satake discloses a method for recording images of small particles, such as grains from cereals and like crops, to analyze the quality of the particles, especially to detect any cracking in the particles, said method comprising step of (column 1, lines 1-6, evaluating cracked grains, and column 5, lines 1-6, detecting cracked grain);

feeding particle sample which each comprise at least one particle, to a place for recording an image (column 4, lines 65 through column 5, line 5, evaluate such as grade grains as damaged, scratched or cracked grain);

illuminating a particle sample from at least two directions simultaneously, the illuminating occurring with different light wavelength for each direction (column 5, lines 26-37,

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refer to light sources and sample grains, also column 8, line 60 through column 9, line 11, direction of light, Fig. 1, item 102 and 94 (refer to two direction), and column 3, lines 55-59, two light sources having different ranges of wavelengths);

recording an image of the illuminated particle sample with the aid of an image-recording means, which records partial images of the particle sample in different channels, which are sensitive to different wavelengths (column 10, lines 52-59, with the levels of threshold values stored correspondence to a plurality of grades of rice grain);

and comparing the different partial images for analysis of the particle sample, each partial image showing the particle sample illuminated from one direction by the channel recording only one of the different light wavelengths (column 8, lines 12-21, different data for different evaluation (or comparing), and column 10, lines 39-58 differences between wavelength of first beam of light and second beam of light and comparing two kinds of electrical signals).

However Satake is silent about "image of particle in different channels". On the other hand Gray in the same field of grains evaluation teaches scanning processing, which the film grain in digital counts resulting for each color channel for several original digital count values of grains (column 3, lines 3-23).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the system of Satake according to the teaching of Gray because it provides modification of digital images to correct a whole range of digital images for desired appearance and improved accuracy.

Regarding claim 2, Satake discloses the method, wherein the illumination and recording of an image of a particle sample occur from angles to the particle sample which are so different that essentially no directly reflected light from the particle sample reaches the image-recording means (column 4, lines 28-47, releases an appropriate amount of sample, also column 9, lines 34-49, refer to angle and direction of light).

Regarding claim 3, Satake discloses the method, wherein the particle sample is illuminated with sweep light, i.e. the illumination occurs with sweeping incidence on the particle sample, and the angle of incidence of the light is close to 90° to the direction of the image-recording means (column 4, line 64 through column 5, line 6, and Fig.1, surface 52, which sample grains pass through surface 52, and light 96, in direction of perpendicular).

Regarding claim 4, Satake discloses the method, wherein the particle samples are fed during continuous movement (column 4, lines 28-41, refer to amount of samples releases from supply hopper which carries at the bottom through the valve).

Regarding claim 6, Satake discloses the method as claimed in claim 1, wherein light transmitted through the particle sample is measured in the image-recording means (column 10, lines 52-59 storing values).

Regarding claim 12, Satake discloses the method, wherein the image-recording means is a digital camera (Fig. 9, element 200).

Regarding claim 14, Satake fails to disclose “different light wavelengths comprise red, green, and blue”. On the other hand Gray in the same field of recording image teaches deviation or variance per red, green, and blue color recorded as a function of average local density (column 2, lines 22-39).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the system of Satake according to the teaching of Gray because it provides visual perception that enable one to differentiate otherwise identical objects, which can easily be implemented in recording device, to identify the existence of the desired image and improved accuracy.

Regarding claim 22, Satake discloses the device, wherein the carrier has sample holders for taking up one particle in each sample holder (Fig. 10, element 21 refer to sample holder).

Regarding claims 7 and 26, it recites similar limitation as claims 4 and 12 are similarly analyzed.

Regarding claims 8 and 15, it recites similar limitation as claim 1 is similarly analyzed.

Regarding claims 16-19 and 20-21, it recites similar limitation as claims 2, 3, 4 and 5 are similarly analyzed.

### **Allowable Subject Matter**

3. Claims 5, 9, 10, 11, 13, 23-25 and 27, are objected as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitation of the base claim and any intervening claims.

### ***Other prior art cited***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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U.S. patent (6,610,378) to Kimura et al is cited for biaxially oriented polyester film to be formed into containers.

U.S. patent (5,956,413) to Oste et al is cited for method and device for automatic evaluation cereal grains and other granular products.

U.S. patent (5,368,996) to Asami is cited for color photographic material.

U.S. patent (5,835,206) to Tragesser is cited for use of color image analyzers for quantifying grain quality traits.

### **Contact Information**


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seyed Azarian whose telephone number is (703) 306-5907. The examiner can normally be reached on Monday through Thursday from 6:00 a.m. to 7:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta, can be reached at (703) 308-5246. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application information Retrieval (PAIR) system. Status information for published application may be obtained from either Private PAIR or Public PAIR.

Status information about the PAIR system, see [http:// pair-direct.uspto.gov](http://pair-direct.uspto.gov). Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Seyed Azarian*  
*Patent Examiner*

  
Jayanti K. Patel  
Primary Examiner

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*Group Art Unit 2625*

February 9, 2004

*Spe. Agent*